INDUCTION ASSESSMENT TRAINING

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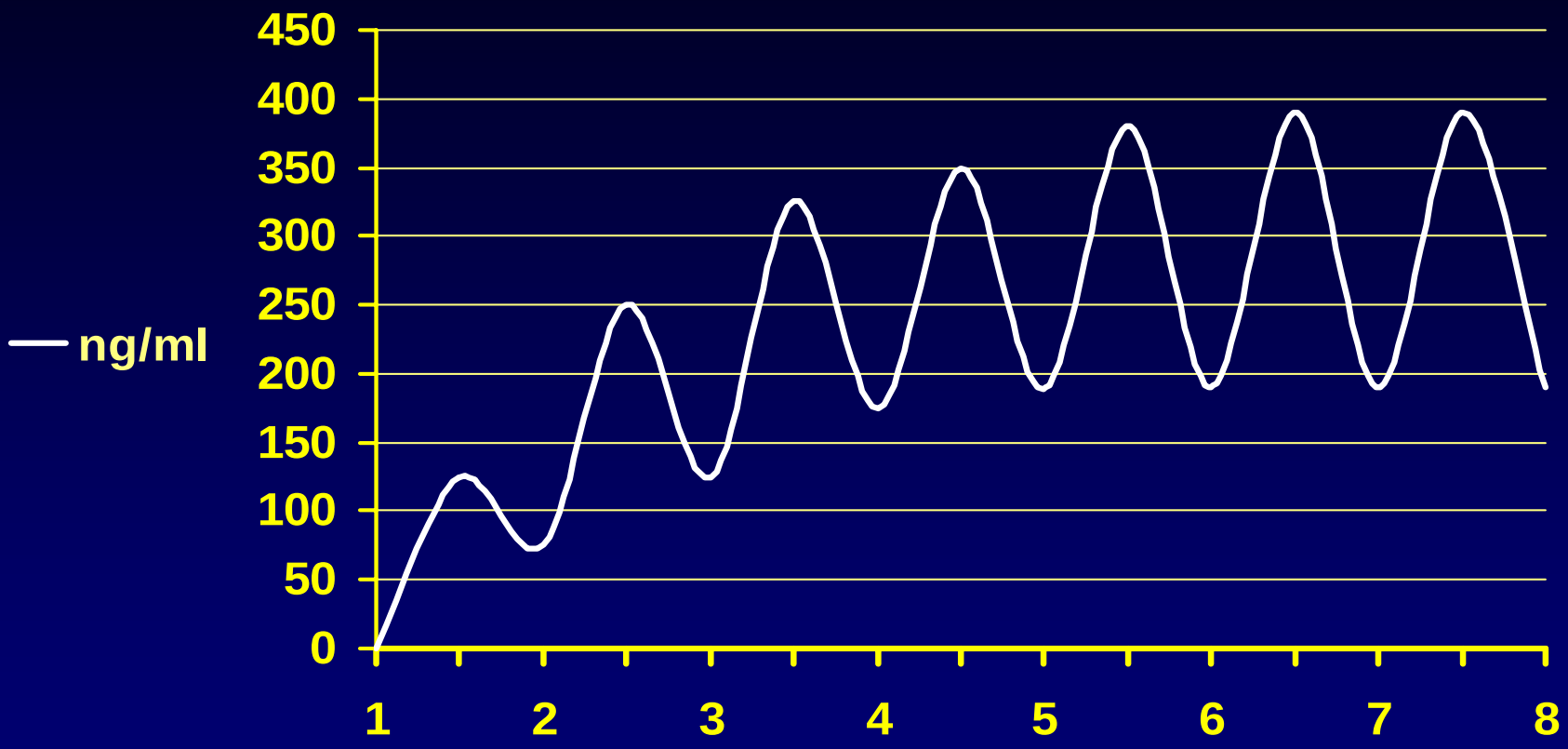
GOALS: OPIOID AGONIST TREATMENT

- Prevention or reduction of withdrawal symptoms
- Prevention or reduction of drug craving
- Prevention of relapse to use of addictive drug
- Restoration to or toward normalcy of any physiological function disrupted by drug abuse

Source: MJ Kreek, Rationale for Maintenance Pharmacotherapy of Opiate Dependence, 1992

Steady State: The point at which during each interdose interval the rise and fall of drug concentration for the interdose interval is identical for each dose

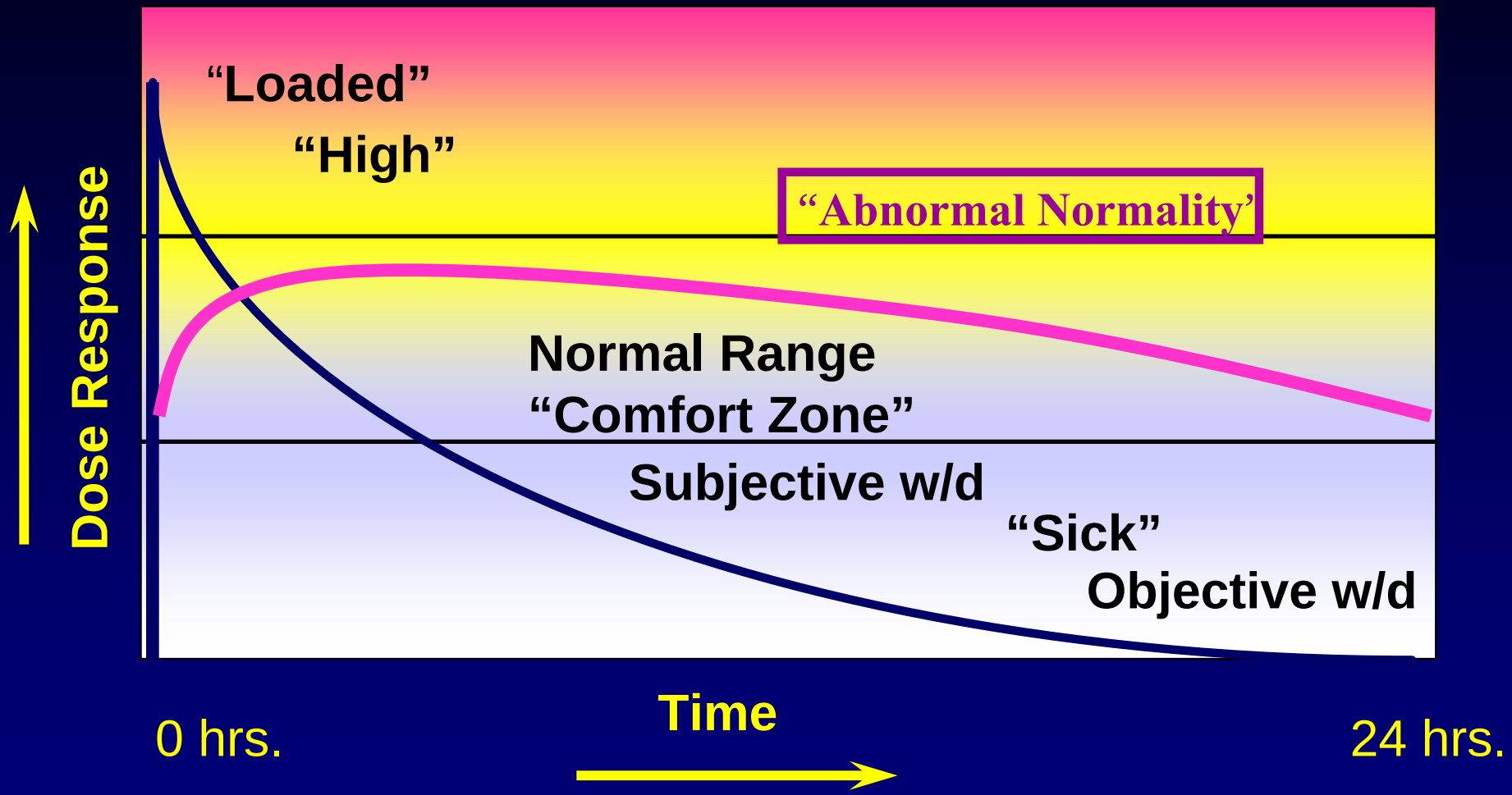


Days/Half-Lives – Methadone half-life= 24-36 hours

Dose constant at 30 mg daily. Interdose interval = 24 hrs (trough to trough)

Peak levels increase daily for 5-6 days with NO increase in dose!

Methadone Simulated 24 Hr. Dose/Response
At steady-state in tolerant patient



GOALS: OF METHADONE INDUCTION

- Titrate dose to achieve steady-state with methadone levels (clinically determined) in the "comfort-zone" throughout and beyond the dosing interval.
- Avoid over-medication and methadone toxicity.
- Ensure "adequate dose" (see slide 2)
- Avoid slow ultra conservative induction

METHADONE INDUCTION:SUMMARY

1. Eligibility & Suitability for OAT
2. ***Objective*** Determination of ***Current Physical Dependence***
3. Assess & Estimate Tolerance (low, moderate, or high)
4. Initial Dose; up and not to exceed 30 mg or total of 40 1st day
5. 5-10 mg “bumps” can be provided 3 or more hours after observed dose with persistent and ***significant*** withdrawal
6. Assess pt. daily with dose increases of 5-10 mg until pt. reports comfort during **peak methadone** hours (3-5 hrs.)
7. Hold dose 5-7 days to allow steady-state to occur
8. Induction ends with 7 days comfort and stability at ***a*** dose

METHADONE INDUCTION: DOSING

Each day's dose is based on the response to the previous dose during peak levels of methadone.

A suggested guideline:

- -1 @ 3-5 hours – Increase dose by 5 mg
- -2 or -3 @ 3-5 hours – Increase dose by 10 mg
- 0 @ 3-5 hours – Dose remains same as previous day (total)
- +1 @ 3-5 hours – DECREASE dose 10 mg or 2 levels
- +2 @ 3-5 hours -- DECREASE dose by 50%
- +3 @ 3-5 hours -- WITHHOLD DOSE AND OBSERVE PT.

Why the Fuss Over Induction?

Patients are 6.7 times more likely to die during induction than untreated heroin addicts (Caplehorn & Drummer, 1999).

42% of drug-related deaths occurred during the first week of OMT (Zador & Sunjic, 2000).

10 OMT deaths are reported — All 10 had been in treatment less than 7 days (Drummer, Opeskin, Syrjanen & Cordner, 1992).

Initial Dose

Degree of Tolerance	Dose Range
Non-Tolerant	10 mg +/- 5
Unknown Tolerance	20 mg +/- 5
Known Tolerance	*up to* 30 mg*

* 5-10 mg “bump” after 3 hours, not to exceed 40 mg first day unless MD documents that 40 mg did not relieve w/d.

Estimation of Degree of Opioid Tolerance

Reports of amounts of drug use are not entirely reliable but deserve consideration.

Duration of use, frequency of use, drug(s) of choice, & ROUTE OF ADMINISTRATION are important. Focus on previous 1-2 weeks.

For example, snorting heroin is not efficient drug delivery, in contrast to IV use. A $100/day snorter will require significantly less methadone than a $100/day IV user.

Oral prescription pain meds .. Consider 20 mg initial dose.

According to Goodman & Gilman's 9th edition, 20 mg oral methadone is equivalent to 5-10 mg Oxycodone. (acutely, single dose in non-tolerant individuals)

Does that mean that a person using 150 mg Oxycodone PO daily would require 300 mg methadone?.....

Opioid Tolerance, continued from previous slide….

NO!, NO!, NO WAY!!!!!

-For patients previously receiving morphine >= 300 mg/day PO: >= 25 mg/day PO methadone (12:1 ratio).

See “Methadone: Clinical Pharmacology” in CMG Methadone Reader

Recent CMG patient with documented 1200 mg/day, Oxycontin started with 30 mg, routine induction, stabilized and well controlled at 100 mg/day methadone. (1200/12=100)

Early Induction

Early dose adjustments to reach the “Therapeutic Window” as determined by established opioid tolerance.

-- ***The “Comfort Zone” –***

Increase dose daily until pt. comfortable during methadone peak levels (3-5) hours after dose) then;

Hold dose for at least 3 days, preferably 5-7 days to reach steady-state before further dose adjustments, unless symptoms recur at 3-5 hours.

REMEMBER STEADY-STATE PHARMACOLOGY!

Induction – continued…

- Effect of *a* dose IS NOT determined by clinical presentation at 24 hours.

- Initial doses WILL NOT “hold” for 24 hours

- Effect of a given dose is based on status at 3-5 hrs.

  The patient doing well at 3-5 hours does not need a dose increase, even if showing signs/symptoms of withdrawal at 24 hours.

  If patient thinks an increase is needed, repeat dose from previous day and ask patient to return in 3-4 hours for further assessment.

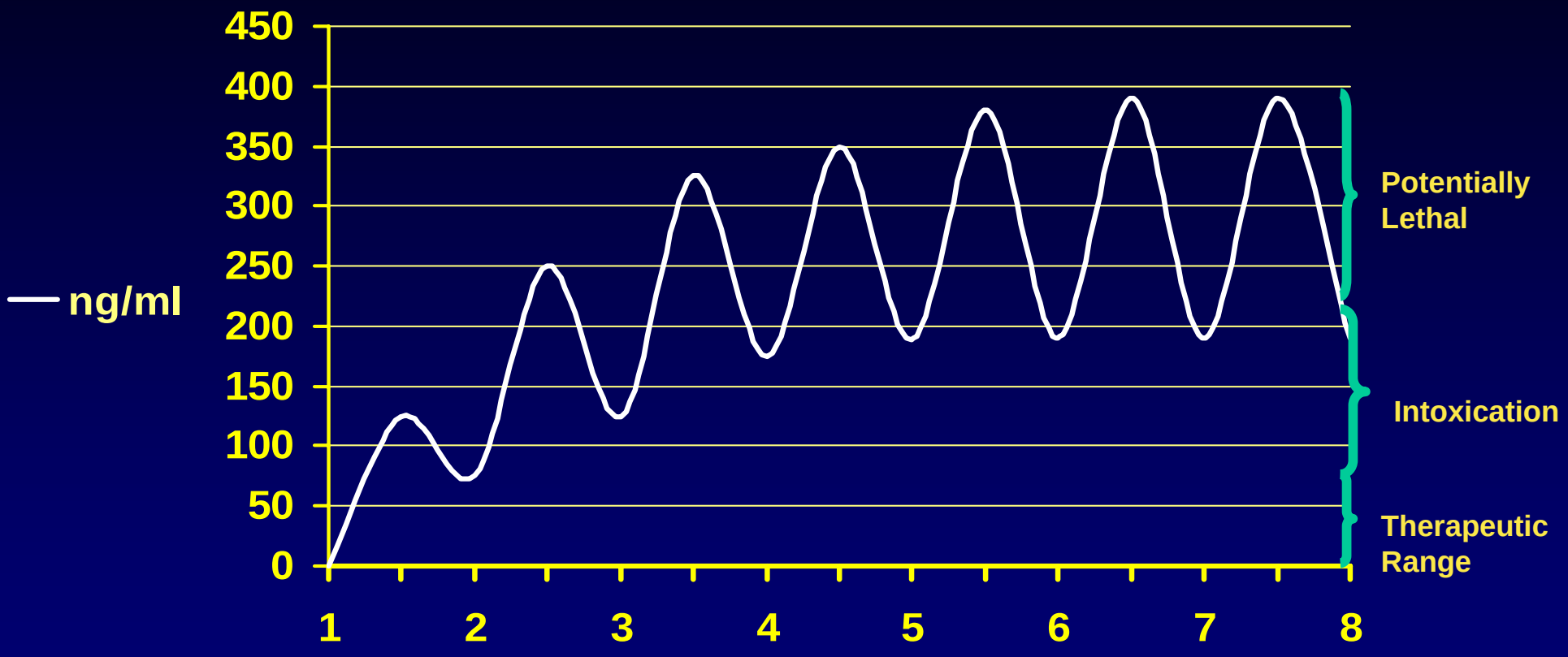
Induction - continued

- ANY SIGN OR SYMPTOM OF OVER-MEDICATION DURING EARLY INDUCTION REQUIRES A DOSE REDUCTION!

Beware the subtle signs/symptoms of overmedication; feeling good, extra energy, staying awake to work, etc.

Patients may need more time, not more medication!

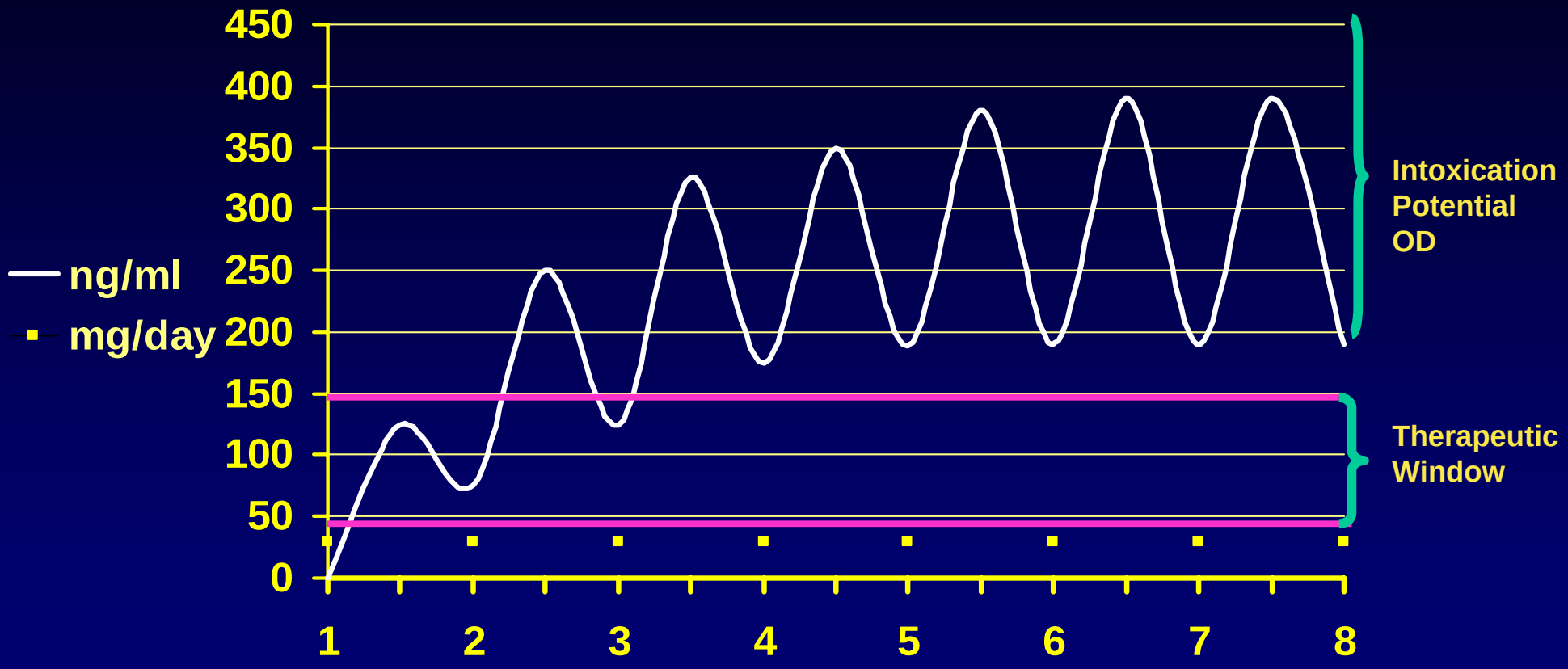
Induction Simulation – Absent to Minimal Tolerance



Dose constant at 30 mg to steady- state.

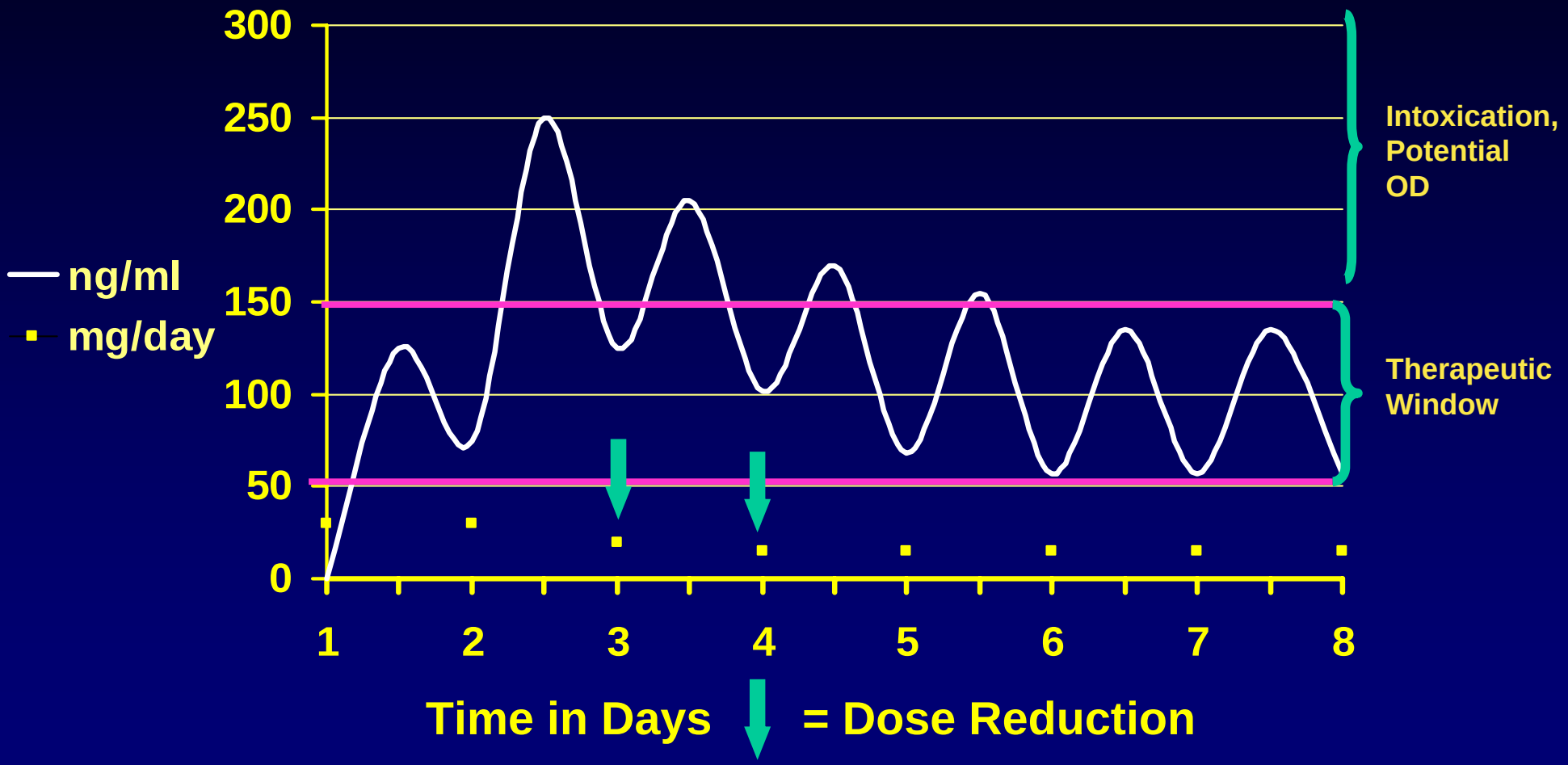
Note: Peak levels increase daily for 5-6 days with NO increase in dose!

Induction Simulation – Low Opioid Tolerance with failure to reduce dose on day 2 or 3

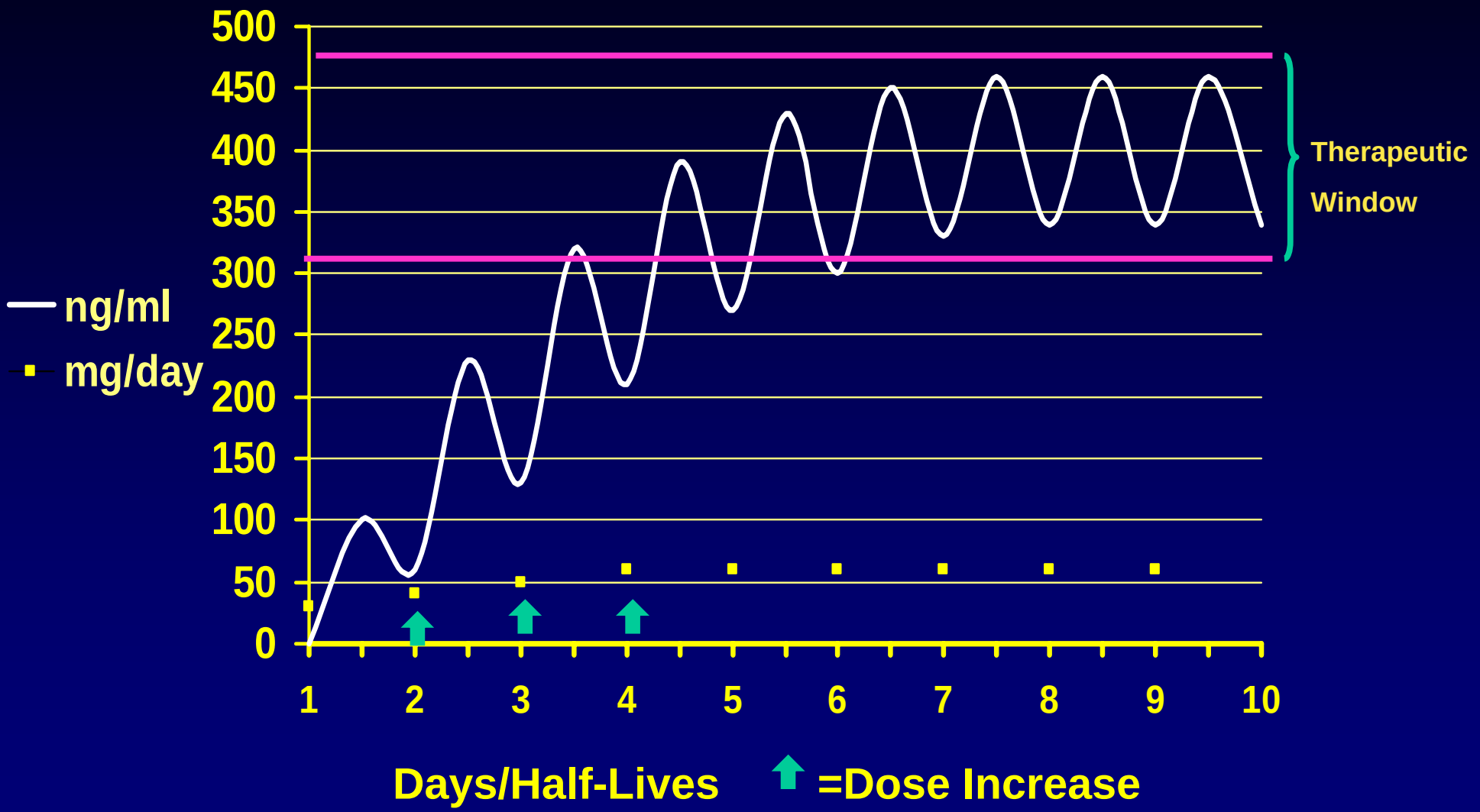


Dose remains constant to steady-state in toxic range

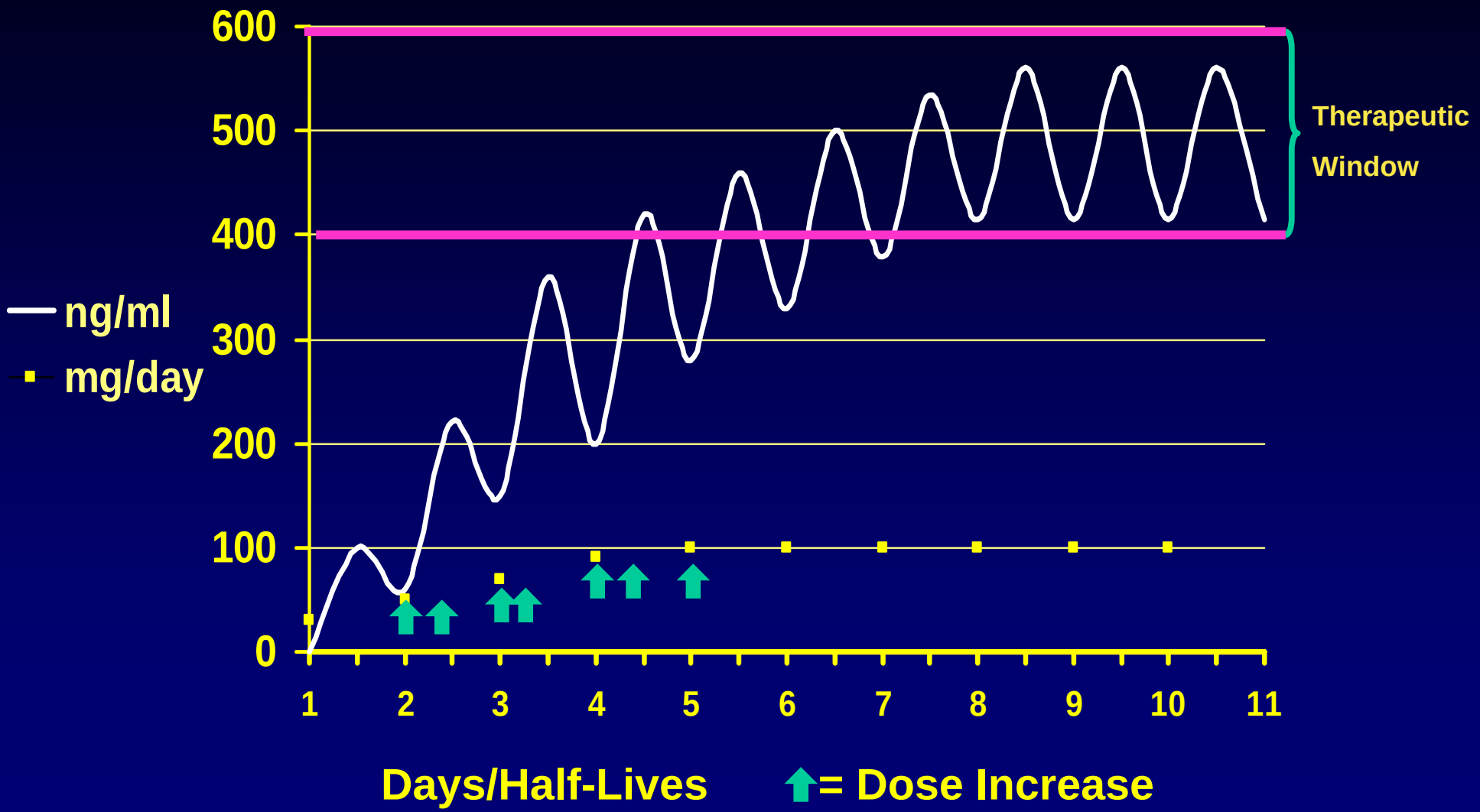
Induction Simulation – Low Dose/Low Tolerance with reduced dose on day 3 & 4



Induction Simulation – Moderate Tolerance



Induction Simulation – High Tolerance



Clinical Pearls

Very severe withdrawal signs/symptoms does not mean very high tolerance or the need for higher doses of methadone.

CMG utilizes instant opiate screens on admission with 2000 ng cut-off

Document signs/symptoms of withdrawal with at least 2 objective signs, as ***evidence*** of CPD.

Document daily assessment using CMG form 38 as a basis for dose decisions during induction.